

Cornell University Library
HD 7293.A3A2 1918h

Standards recommended for permanent indu



3 1924 002 406 472

llr

HD
7293
A3
A2
1918h

U. S. Bureau of Industrial Housing and Transportation.

Standards recommended for permanent industrial housing developments, March, 1918.

HD
7293
A3
A2
1918h



Cornell University
Library

The original of this book is in
the Cornell University Library.

There are no known copyright restrictions in
the United States on the use of the text.

U.S. DEPARTMENT OF LABOR
BUREAU OF
INDUSTRIAL HOUSING AND TRANSPORTATION

STANDARDS

RECOMMENDED FOR

PERMANENT INDUSTRIAL HOUSING DEVELOPMENTS

J. D. HACKETT,
INVESTIGATIONS, CONSULTATIONS.
2 EAST 23RD STREET, NEW YORK.

MARCH, 1918



WASHINGTON
GOVERNMENT PRINTING OFFICE

1918
KRS

ACKNOWLEDGMENT.

The following standards for permanent buildings to be constructed for the housing of industrial war workers were adopted by the Bureau of Industrial Housing and Transportation of the Department of Labor, in consultation with Mr. Lawrence Veiller, secretary National Housing Association, on March 7, 1918. The original draft was prepared by Mr. Veiller. It was discussed and modified in a series of conferences in the course of which the following persons took part and offered helpful suggestions:

Grosvenor Atterbury, architect, member of the Committee on War-time Housing of the National Housing Association.

Alexander Bing, secretary of the Housing Committee of the Emergency Fleet Corporation.

Charles B. Ball, chief sanitary inspector, Chicago.

Owen Brainard, architect and engineer.

Arthur C. Comey, landscape architect.

Francis Dykes, real estate department, Bethlehem Steel Co.

Otto M. Eidlitz, civil engineer and builder.

James Ford, professor of social ethics, Harvard University.

Philip Hiss, architect, chairman Section on Housing, Committee on Labor, Council of National Defense.

John Ihlder, housing investigator.

Harlean James, executive secretary Section on Housing, Committee on Labor, Council of National Defense.

Walter H. Kilham, architect.

Robert D. Kohn, architect, member of the Housing Committee of the Emergency Fleet Corporation.

Joseph D. Leland, 3d, architect.

Perry R. MacNeille, consulting architect to the Emergency Fleet Corporation.

Horace B. Mann, architect.

Marcia Mead, architect.

John Nolen, landscape architect, member of the Committee on War-time Housing of the National Housing Association; member of the Housing Committee of the Emergency Fleet Corporation.

Frederick Law Olmsted, landscape architect, member of the Committee on Emergency Construction, Council of National Defense.

E. L. Palmer, jr., architect.

William C. Post, architect.

Lincoln Rogers, Bureau of Yards and Docks, United States Navy.

I. N. Phelps Stokes, architect.

Lawrence Veiller, secretary National Housing Association; member of the Committee on War-time Housing of the National Housing Association.

George S. Welsh, architect.

HOUSING STANDARDS

FOR PERMANENT CONSTRUCTION.

These standards are not intended as inflexible requirements, but any plans which fail to conform to them are not likely to be accepted unless supported by very strong reasons. Local building codes, housing laws, and similar ordinances are to be followed: *Provided, however,* That in case such local regulations permit or require anything not permitted by these standards the express approval of this bureau is to be obtained before departing from the standards as here outlined.

TYPES OF HOUSES.

(Principal types only.)

- Type 1. Single-family house.
- Type 2. Two-family house.
- Type 3. Single-family house with rooms for lodgers or boarders.
- Type 4. Lodging house for men.
- Type 5. Hotel for men.
- Type 6. Lodging house for women.
- Type 7. Hotel for women.
- Type 8. Tenement house.
- Type 9. Boarding house.

I. GENERAL PROVISIONS.

All types of houses to conform to these general provisions and, in addition, to certain special provisions as later indicated.

1. **Arrangement.**—Row or group houses normally not to be more than two rooms deep.

2. **Basements.**—No living quarters to be in basements.

3. **Closets.**—Every bedroom to have a clothes closet, opening from the room. Built-in wardrobe dressers will not be accepted. Normally such closet to be not less than 22 inches deep and with door. Closets to be supplied with rods to take coat hangers.

4. **Cooking.**—Gas preferred, but flue for coal stove to be provided; all flues to be lined. The question of whether or not cook stoves are to be provided with the house to be considered at the time materials are being ordered.

5. **Fences.**—Board fences will not be accepted. Hedges or open metal fences desirable. Suitable arrangements for drying clothes to be provided. Where there are open metal fences the fence standards can be designed for this purpose.

6. **Furniture space.**—Beds to be indicated to scale on plans (double beds, 5 feet by 6 feet 6 inches; single beds, 3 feet by 6 feet 6 inches). Location of beds not to interfere with windows or doors. It is recommended that beds be free standing and not located in a corner or with the side against a wall. Space to be provided for two pieces of furniture in addition to bed. Halls, stairs, and doors to permit easy moving of furniture.

7. **Gardens.**—Allotment gardens, conveniently accessible, preferable to increasing the size of the lot to provide for individual back-yard vegetable gardens.

8. **Lighting.**—Electricity preferred.

9. **Materials of exterior.**—Materials dependent on local supplies; brick, terra cotta, stone, or concrete preferred. Outer walls to be insulated against dampness and condensation. Rat nogging to be provided. Roof to be fire resisting; leaders and gutters not essential unless drip will do harm.

10. **Open spaces.**—Side-yard space between adjacent buildings to be preferably 20 feet; minimum, 16 feet; such space to be increased proportionately for each additional story, or part of story, above two stories. If this space is not obtainable because of lot sizes or land values, houses should be built in rows or groups.

Rear-yard depth not to be less than height of building, nor in any case less than 20 feet. Minimum distance between backs of houses to be 50 feet. Consideration to be given as to whether sites should be provided for garages. When not an integral part of the house, garages should preferably be at the rear of the lot, should not be located closer than 15 feet to the nearest part of house, and should not exceed one story in height.

Front yard. where practicable; minimum

PLUMBING.—House drain under house and 5 feet outside to be heavy cast iron. Vitrified clay pipe, with proper joints, may be used where ordinance permits. It is recommended that soil and waste pipes be extra heavy cast iron or genuine wrought iron, and waste pipes to be extended through roof. A 3-inch soil stack preferred where not more than two water-closets are placed on a stack.

Water-closets to be porcelain and wash-down, siphon, or siphon jet type, with individual flush tank. Open-front seat recommended. Outdoor water-closets will not be accepted. Privies will not be accepted. Cellar water-closets not permitted except where supplementary to accommodations herein required.

Access to water-closet compartments to be from hall or vestibule, never solely from a room. Plunger, pan, long-hopper, and range closets will not be accepted.

Hot and cold water to be provided to all fixtures, with proper drains and shut-offs. Wooden sinks and wash trays will not be accepted.

All fixtures to be separately trapped except in batteries of wash trays and combined sink and wash tray, where one trap is sufficient.

Venting of traps to conform to approved practice, except that the back venting of the top or only fixture on a line is not required. Sink and lavatory traps to be connected direct to the vertical wastes, and not to floor branches. Exposed pipes preferred, and, when exposed, wrought iron preferred. Where possible, lines to be concentrated and kept from outside walls.

12. **Porches.**—Desirable. To be of durable construction, particularly the foundations; to be restricted from encroaching on minimum side yard or unduly darkening rooms.

13. **Rear entrances.**—In the case of row or group houses there may be access to the rear through minor one-way public streets. Such streets to be not less than 12 feet wide; to be properly paved, curbed, drained, and lighted. Private alleys will not be accepted.

14. **Roof air space.**—In every house there shall be a minimum clear space of 8 inches between the ceiling and the roof; this space to be provided with adequate waterproof openings for ventilation, at both ends if practicable.

15. **Rooms, number of.**—Bathrooms are not to be counted as rooms.

16. **Stairs.**—Risers to be not more than 8 inches high and treads to be not less than 9 inches wide. Winding stairs will not be accepted except in types 1, 2, and 3. Not more than 2 winders will be allowed in series. Treads must measure at least 9 inches wide 18 inches from rail.

17. **Ventilation.**—Every room to have at least one window opening directly to the outer air. Two windows in each room generally preferred; one window sufficient in small bedrooms. Each room to have a window area of not less than 12 square feet.

Cross ventilation as direct as possible to be provided for all rooms through windows, transoms, or doors; communicating door recommended between front and rear bedrooms in row houses.

Every bathroom to have window of not less than 6 square feet in area opening directly to the outer air.

Every water-closet compartment to have a window of not less than $4\frac{1}{2}$ square feet in area opening directly to the outer air. A skylight in the roof, with an equal amount of glass area and provided with adequate ventilators, will be accepted in lieu of such window, but skylights are not desirable.

18. **Windows.**—Minimum area to be measured between stop beads. Window head to be as near ceiling as practicable. Windows may be double-hung, pivoted, or casement. If double-hung, upper and lower sash to be the same size. In cities with soft-coal smoke nuisance, minimum area to be increased.

Window frames to be designed to accommodate screens and outside shutters. In cold climates, weather strips are recommended.

II. SPECIAL PROVISIONS FOR TYPES 1, 2, AND 3.

In addition to complying with all general provisions, types 1, 2, and 3 are to comply with the following special provisions.

Type 1. Single-family house.

Type 2. Two-family house. ("Two-flatter," one family upstairs, one down. For "double house," see "single-family house, semidetached.")

Type 3. Single-family house with rooms for not more than three lodgers or boarders.

1. **Arrangement.**—Types 1 and 3 not to be over $2\frac{1}{2}$ stories high. Type 2 not to be over 2 stories high.

When detached or semidetached, types 1, 2, and 3 normally not to be over 3 rooms deep; when in rows or groups, not to be over 2 rooms deep except that the end house of row may be 3 rooms deep.

2. **Cellar.**—To be well lighted, cross ventilated, dry, and paved or cemented. Minimum clear height under joists, 6 feet 6 inches. When hot-air furnaces are used, minimum height 7 feet. Cellar not essential under whole house. Where climatic or soil conditions make cellar inadvisable it may be omitted, in which case adequate provision is to be made for storing fuel. Where cellar is omitted, house to be set up on masonry piers or walls 2 feet clear from ground; space to be drained, inclosed, and ventilated.

3. **Grouping.**—Single-family houses of the more expensive type preferably to be detached houses, but may be semidetached or even attached in rows or groups. In other cases where land values permit, detached or semidetached are desirable; otherwise attached in rows or groups.

4. **Heating.**—Provision to be made for heating houses. If not otherwise heated, bathroom to be heated from kitchen stove.

5. **Materials of exterior.**—Brick, terra cotta, stone, or concrete preferred; but wood frame clapboarded, shingled, or stuccoed permitted for detached or semidetached houses not over $2\frac{1}{2}$ stories high. Party walls to be of brick, terra cotta, stone, or concrete.

6. **Plumbing.**—Bathtub (shower is not sufficient).

Lavatory, to be preferably in bathroom.

Sink to be in kitchen; rim 36 inches above floor.

Washtubs with covers, preferably two, rim 36 inches above floor, to be set in kitchen or in well-lighted, dry, and ventilated cellar.

Water-closet to be inside the house in well-lighted and ventilated compartment, with window of $4\frac{1}{2}$ square feet minimum area to outer air, and preferably with impervious floor not of concrete.

7. Rooms, height of.—Minimum, 8 feet.

Sloping ceilings and "knee walls" will be accepted only under the following conditions: Roof space above flat portion of ceiling to be of ample size and adequately ventilated; spaces between rafters of sloping portion to be adequately ventilated into roof space; bedroom to have greater window area and better cross ventilation than the minimum permissible for a standard flat-ceiling room; bedroom to have a minimum height of 8 feet over an area of at least 40 square feet with a minimum flat-ceiling width of $3\frac{1}{2}$ feet, and a clear height of not less than 6 feet over an area of at least 80 square feet with a minimum width of 7 feet.

8. Rooms in attic.—As a rule, in $2\frac{1}{2}$ -story houses, only one bedroom to be provided in the attic.

9. Rooms, number and use of.—In types 1 and 2: For higher-paid workers, five-room type preferred, with parlor, large kitchen, 3 bedrooms, and bathroom. Dining room and kitchenette may be provided in place of the large kitchen. Four-room type to be provided sparingly for higher-paid workers. Six-room type, with 4 bedrooms, or 3 bedrooms and parlor convertible into fourth bedroom, suited for abnormally large families only, and should be provided sparingly. Six-room type should normally have parlor, dining room, kitchen, 3 bedrooms, and bathroom.

For lower-paid workers, four-room type desirable, with parlor, kitchen, 2 bedrooms, and bathroom.

Any house having more than seven rooms to be treated as type 3.

In type 3, in addition to family quarters indicated above, single rooms for lodgers to be provided. In addition to the family water-closet accommodations, a water-closet compartment containing lavatory to be provided for the sole use of the lodgers. Lodgers to have access to their bedrooms and to their water-closet compartment without going through rooms designed for use of family.

10. Rooms, size of.—One large bedroom to be provided, size 10 by 12 to 12 by 14 feet.

Small bedrooms, minimum area, 80 square feet; minimum width, 7 feet.

Parlor, 10 by 12 to 12 by 14 feet.

Dining room, 9 by 12 to 12 by 14 feet.

Kitchen (where there is no separate dining room), 10 by 12 to 12 by 14 feet.

Kitchenette (only where there is a separate dining room), minimum width, 6 feet; minimum area, 70 square feet.

III. SPECIAL PROVISIONS FOR TYPES 4 AND 5.

In addition to complying with all general provisions, types 4 and 5 must comply with the following special provisions.

Type 4. Lodging house for men.

Type 5. Hotel for men.

1. **Arrangement.**—Provision to be made for 75 men or more. Height limited to 4 stories, except in large cities.

2. **Cellar.**—Minimum height, 7 feet; to be well lighted, cross ventilated, dry, and paved or cemented. Cellar not essential under whole building. Where omitted, building to be set up on masonry piers or walls 2 feet clear from ground; space to be drained, inclosed, and ventilated.

3. **Fire protection.**—If over 4 stories high, to be fireproof throughout. If over 3 stories high, first-floor construction to be fireproof.

If over 2 stories high, a nonfireproof building the area of which exceeds approximately 3,000 square feet to be divided by fire walls of brick, terra cotta, stone, or concrete into areas not exceeding approximately 3,000 square feet each. All openings in such walls to be provided with fireproof self-closing doors.

Adequate means of egress to be provided to street or yard by an additional flight of stairs, or by fire tower or stair fire escape (fire escape less desirable). All such additional means of egress to be remote from the main stairs and separated therefrom and from the other parts of the building by walls of brick, terra cotta, stone, or concrete, with fireproof self-closing doors at all openings. Such additional means of egress to be so located that no room shall be more than 40 feet from a means of egress. All main egress doors to swing out.

All stairs and stair halls to be not less than 3 feet wide in the clear and to be inclosed in walls of brick, terra cotta, stone, or concrete, with fireproof self-closing doors at all openings. All doors to stair halls to swing into stair hall without obstructing free passage.

Dumb-waiters and elevators will not be accepted in stair inclosure; they should be inclosed in fireproof shafts with fireproof doors, those for dumb-waiters to be self-closing. Inside cellar stairs to be inclosed with walls of brick, terra cotta, stone, or concrete, with self-closing fireproof doors. Standpipes with hose reels on each floor to be so located that any point can be reached with 75 feet of hose.

4. **Heating.**—Except where connected with a central plant, provision to be made for independent heating.

5. **Materials of exterior.**—To be brick, terra cotta, stone, or concrete, except that wood frame will be accepted for one-story buildings.

6. **Plumbing.**—Minimum provision: One water-closet per 12 men; one urinal per 16 men; one lavatory per 8 men; one shower per 10 men; one bathtub per floor, provided there is not less than one per

50 men. Ratio to be increased where there are less than 50 men per floor. Floor and base of toilet rooms to be waterproof not of concrete. Sufficient water-closets to be provided in the cellar or basement for the accommodation of engineers, firemen, and laundry workers.

7. **Rooms, height of.**—Height for public rooms, 9 to 12 feet; minimum for bedrooms, 8 feet.

8. **Rooms, number and use of.**—Each lodger to have separate room. Two-men rooms not permitted. (Cubicles and dwarf partitions will not be accepted.)

Each floor to have a general bathroom containing required showers, tub, and lavatories. Each floor also to have a general toilet room containing required water-closets and urinals. Each of the two rooms to have windows opening directly to the outer air, and to be separate but adjoining and communicating. Service closets with slop sinks and space for brooms and pails to be provided on each floor.

Smoking room, reading room, billiard room, physician's room, laundry for washing clothes, superintendent's office and adequate quarters for superintendent to be provided. Unless provided elsewhere in the community, bowling alleys to be in basement.

Hotel (type 5) also to have dining room and cafeteria with outside access thereto, and with pantry, service rooms, kitchen, and toilet facilities for men and women employees. An additional general toilet room is to be provided conveniently accessible.

9. **Rooms, size of.**—Single bedrooms to have a minimum area of 70 square feet and minimum width of 7 feet.

10. **Ventilation.**—Bedroom doors preferably to be placed opposite each other and to have transoms or slat panels.

11. **Windows.**—One window in each room to have minimum area of 12 square feet between stop beads.

IV. SPECIAL PROVISIONS FOR TYPES 6 AND 7.

In addition to complying with all general provisions, types 6 and 7 must comply with the following special provisions.

Type 6. Lodging house for women.

Type 7. Hotel for women.

1. **Arrangement.**—Provision to be made for 75 to 150 women (with less than 75 the unit is not economical; with more than 150 there are difficulties in management and supervision).

Height limited to 4 stories, except in large cities.

2. **Cellar.**—Minimum height, 7 feet; to be well lighted, cross ventilated, dry, and paved or cemented. Cellar not essential under whole building. Where omitted, building to be set up on masonry piers or

walls 2 feet clear from ground; space to be drained, inclosed, and ventilated.

3. Fire protection.—If over 4 stories high, to be fireproof throughout. If over 3 stories high, first-floor construction to be fireproof.

If over 2 stories high, a nonfireproof building the area of which exceeds approximately 3,000 square feet to be divided by fire walls of brick, terra cotta, stone, or concrete into areas not exceeding approximately 3,000 square feet. All openings in such walls to be provided with fireproof self-closing doors. Adequate means of egress to be provided to street or yard by an additional flight of stairs, or by fire tower or stair fire escape (fire escape less desirable). All such additional means of egress to be remote from the main stairs and separated therefrom and from other parts of the building by walls of brick, terra cotta, stone, or concrete, with fireproof self-closing doors at all openings. Such additional means of egress to be so located that no room shall be more than 40 feet from a means of egress. All main egress doors to swing out.

All stairs and stair halls to be not less than 3 feet wide in the clear and to be inclosed in walls of brick, terra cotta, stone, or concrete, with fireproof self-closing doors at all openings. All doors to stair halls to swing into stair hall without obstructing free passage.

Dumb-waiters and elevators will not be accepted in stair inclosure; they should be inclosed in fireproof shafts with fireproof doors, those for dumb-waiters to be self-closing. Inside cellar stairs to be inclosed with walls of brick, terra cotta, stone, or concrete, with self-closing fireproof doors. Standpipes with hose reels on each floor to be so located that any point can be reached with 75 feet of hose.

4. Heating.—Except where connected with a central heating plant, provision to be made for independent heating.

5. Materials for exterior.—To be of brick, terra cotta, stone, or concrete, except that wood frame will be accepted for one-story buildings.

6. Plumbing.—Minimum provision: One water-closet per 10 women, one lavatory per 6 women, one body shower per 10 women, one bathtub per 25 women. Ratio to be increased where there are less than 50 women per floor. Floor and base of toilet rooms water-proof, not of concrete. Dwarf partitions between lavatories to extend at least 6 feet above the floor and have curtains. Sufficient water-closets to be provided in the cellar or basement for the accommodation of engineers, firemen, and laundry workers.

7. Rooms, height of.—Height for public rooms, 9 to 12 feet; minimum for bedrooms, 8 feet.

8. Rooms, number and use of.—Each lodger to have separate room. (Cubicles and dwarf partitions will not be accepted.) Rooms for

two women not permitted. Each floor to have a general bathroom containing required body showers, tub, and lavatories. Each floor also to have a general toilet room containing required water-closets. Each of these two rooms to have windows opening directly to the outer air, and to be separate, but adjoining and communicating. Service closet, with slop sink and space for brooms and pails to be provided on each floor.

First floor to have matron's office so placed as to oversee the single entrance and access to sleeping quarters; to have reception parlors or alcoves (one for every 20 women), or large parlor with furniture arranged for privacy in conversation; also assembly hall with movable partitions and set stage.

Kitchenette, sitting room, and sewing room to be provided on at least alternate room floors. Matron's quarters, physician's room, and infirmary, laundry in which lodgers can wash their clothes, and trunk room to be provided.

Hotel (type 7) also to have dining room and cafeteria, with outside access thereto, with pantry, service rooms, kitchen, and toilet facilities for employees. An additional toilet room is to be provided conveniently accessible.

9. **Rooms, size of.**—Single bedrooms to have a minimum area of 70 square feet and minimum width of 7 feet.

10. **Ventilation.**—Bedroom doors preferably to be placed opposite each other, and to have transoms or slat panels.

11. **Windows.**—One window in each room to have minimum area of 12 square feet between stop beads.

V. SPECIAL PROVISIONS FOR TYPE 8.

Type 8. Tenement house (including flats or apartments), a building occupied in whole or in part by three or more families.

Tenement and apartment houses are considered generally undesirable and will be accepted only in cities where, because of high land values, it is clearly demonstrated that single and two-family houses can not be economically provided, or where there is insistent local demand for this type of multiple housing. In any case, they will be accepted only where the Bureau of Industrial Housing and Transportation is convinced that local conditions require or justify their use. They must conform in general to local building ordinances, to the general provisions of these standards, and to other special provisions to be issued by the Bureau of Industrial Housing and Transportation.

VI. SPECIAL PROVISIONS FOR TYPE 9.

In addition to complying with all general provisions, buildings of type 9 must comply with the following special provisions.

Type 9. Boarding house. Where more than 3 and less than 25 rooms for lodgers are provided, building to be classed as boarding house. If 3 lodgers or less, building to be classed as type 3; if 25 or more, to be classed as type 4, 5, 6, or 7.

1. **Access.**—Lodgers to have access to their bedrooms and to their water-closet compartments and bathrooms without going through rooms designed for use of family. Separate outside entrance for lodgers recommended.

2. **Arrangement.**—Not to be over 3 stories high. Not to be over 2 rooms deep, except that the end house of rows may be 3 rooms deep.

3. **Cellar.**—To be well lighted, cross ventilated, dry, and paved or cemented. Minimum clear height under joists, 7 feet. Cellar not essential under whole house; where omitted, house to be set up on masonry piers or walls 2 feet clear from ground; space to be drained, inclosed, and ventilated.

4. **Fire protection.**—If frame, not to be over 2 stories high. If over 2 stories high, adequate means of egress to be provided to street or yard by an additional flight of stairs, or by fire tower or stair fire escape (fire escape least desirable). All such additional means of egress to be remote from the main stairs and separated therefrom and from the other parts of the building by walls of brick, terra cotta, stone, or concrete, with fireproof self-closing doors at all openings. Such additional means of egress to be so located that no room shall be more than 40 feet from a means of egress.

All stairs and stair halls to be not less than 3 feet wide in the clear and to be inclosed in walls of brick, terra cotta, stone, or concrete, with fireproof self-closing doors at all openings.

Dumb-waiters and elevators will not be accepted in stair inclosure; they should be inclosed in fireproof shafts with fireproof doors, those for dumb-waiters to be self-closing.

5. **Heating.**—Except where connected with a central plant, provision to be made for independent heating.

6. **Materials of walls.**—Brick, terra cotta, stone, or concrete preferred, but wood frame clapboarded, shingled, or stuccoed permitted for detached or semidetached houses not over 2 stories high.

7. **Plumbing.**—Family living quarters to have:

Bathtub (shower is not sufficient).

Lavatory, to be preferably in bathroom.

Sink to be in kitchen; rim 36 inches above floor.

Washtubs with covers, preferably two, rim 36 inches above floor, to be set in kitchen or in well-lighted, dry, and ventilated cellar.

Water-closet to be inside the house in well lighted and ventilated compartment, with window of $4\frac{1}{2}$ square feet minimum area to outer air, and preferably with impervious floor not of concrete.

In addition to above, a water-closet compartment containing lavatory to be provided for the sole use of the lodgers. Floor and base of toilet rooms to be waterproof, not of concrete.

The following minimum provisions to be made:

For men, 1 bathtub per 24 lodgers, 1 water-closet, and 1 lavatory per 8 lodgers, 1 shower per 10 lodgers; for women, 1 bathtub per 16 lodgers, 1 body shower per 10 lodgers, 1 lavatory per 5 lodgers, 1 water-closet per 8 lodgers. Dwarf partitions between lavatories for women to extend at least 6 feet above the floor and have curtains.

8. Rooms, height of.—Minimum, 8 feet.

9. Rooms in attic.—No lodgers' rooms in attic accepted.

10. Rooms, number and use of.—Each lodger to have separate room. Rooms for two lodgers not permitted. (Cubicles and dwarf partitions will not be accepted.) Building to contain more than 3 and less than 25 rooms for lodgers. In addition to living quarters for one family, lodgers' bathrooms and toilet rooms containing showers, tubs, lavatories, and water-closets to be provided; preferably, bathroom containing showers, tub, and lavatories to be separate but adjoining and communicating with water-closet compartment. One of each such rooms preferably on each floor. Each of these two rooms to have windows opening directly to the outer air. Lodgers to have a common room, also dining room; the latter to be located near family kitchen; the common room to be conveniently accessible from the outside.

11. Rooms, size of.—Single bedrooms for lodgers to have a minimum area of 70 square feet and minimum width of 7 feet. Size of common room and dining room each to be proportionate to the number of boarders.

12. Ventilation.—Bedroom doors preferably to be placed opposite each other and to have transoms or slat panels.

Cornell University Library
HD 7293.A3A2 1918h

Standards recommended for permanent indu



3 1924 002 406 472

